Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
The Proposed Extension of Part 4 of the	)	PS Docket No. 11-82
Commission's Rules Regarding Outage Reporting	)	
to Interconnected Voice Over Internet Protocol	)	
Service Providers and Broadband Internet Service	)	
Providers	)	

REPLY COMMENTS OF THE UTILITIES TELECOM COUNCIL

Pursuant to Section 1.405 of the Commission's Rules, UTC hereby files its reply comments in response to the Commission's *Notice of Proposed Rulemaking* in the above-referenced matter.[1] UTC supports the Commission's proposals to extend network outage reporting requirements to apply to broadband and VoIP services. UTC agrees with the FCC that its proposals will promote reliability of these services, which will in turn benefit utilities and other critical infrastructure industries to the extent that they use such services to support smart grid and other utility applications. While UTC recognizes that there will be some practical difficulties with extending network outage reporting requirements to broadband and VoIP providers, on balance, the benefits should outweigh the burdens. In addition, UTC agrees with the FCC that it does have the legal authority to adopt network outage reporting requirements, which are reasonably ancillary to its 9-1-1 authority.

Introduction and Background

UTC is the international trade association for the telecommunications and information technology interests of electric, gas and water utilities and other critical infrastructure industries (CII). UTC's members include all types of utilities from large investor-owned utilities that serve millions of customers across multi-state service territories to relatively small rural cooperative utilities and municipal utilities that may only serve a few thousand customers in remote, insular and sparsely populated areas. These

[1] *Proposed Extension of Part 4 of the Commission's Rules Regarding Outage Reporting to Interconnected Voice Over Internet Protocol Service Providers and Broadband Internet Service Providers*, Notice of Proposed Rulemaking, PS Docket No. 11-82, 76 Fed. Reg. 33686 (June 9, 2011)("*NPRM*").

member companies all use communications to support their core mission of delivering essential services to the public safely, securely and efficiently. As such, UTC has advocated for policies that promote and protect utility communications, and it is pleased to offer its reply comments in this proceeding to provide the perspective of utilities and CII on the need for network outage reporting requirements for broadband and interconnected VoIP providers.

Because of the critical nature of the essential services that utilities and CII provide, the communications networks that support those core services are designed, built and maintained to high standards for reliability, coverage and resiliency. Utilities need communications that can withstand hurricanes, snow and ice storms, and that have adequate back-up power to remain operational for 72 hours or more in the event of a power outage. Utilities need reliable communications, particularly during emergencies. As such, utilities typically rely on their own private internal communications networks, particularly to support mission critical operations that affect the safety and reliability of their core services.

While utilities do use commercial service providers for some communications functions, these tend to be used for non-mission critical applications, certain point-to-point communications (e.g. a leased line to a remote substation) or enterprise communications. One of the main reasons that utilities limit their use of commercial services is reliability. Unfortunately, the commercial service providers are subject to network outages and congestion, particularly during emergencies, which can jeopardize the safety and reliability of utility and CII operations. Hence, utilities are concerned about using commercial communications networks due to reliability concerns.

A. Network Outage Reporting Should Promote Reliability of Broadband and Interconnected VoIP Services.

1. Outage reporting will provide metrics that should promote reliability.

Network outage reporting requirements will provide metrics that will encourage commercial service providers to promote the reliability of their services. Utilities have found that their networks are not as reliable as they need for various applications. For example, Northeast Utilities tested the

performance of their commercial service provider's circuits and found that the commercial service provider's network circuits were out three times more than the utility's own private internal circuits.[2] Thus, UTC believes that network outage reporting requirements should provide the kind of metrics to substantiate commercial providers' claims of reliability.

2. Outage reporting needs to be extended to broadband and VoIP.

UTC also agrees with the FCC's assessment that more traffic is migrating from traditional networks to broadband and VoIP services. This general trend is also specifically applicable to utilities, which are converting from narrowband analog systems to wideband digital systems that carry an increasing percentage of data traffic, including VoIP. To the extent that utilities use commercial broadband and/or VoIP services, they need to ensure that those services are reliable. Given the trend towards increasing use of broadband and VoIP, it is appropriate to extend network outage reporting requirements to commercial broadband and interconnected VoIP services, in order to promote the reliability of commercial broadband and VoIP services that utilities and other CII may use.

UTC recognizes that the Financial Services Coordinating Council (FSCC) has also commented on the need for network outage reporting requirements. The FSCC concluded that "having metrics on outages is important for several reasons." Specifically, it found that network outage reporting would help to identify the root causes of network outages and to continuously improve reliability. It also found that financial institutions increasingly rely on VoIP and other broadband services for core services and remote computing. It also agreed that network outage reporting would send a signal to developers of emerging telecommunications technologies to design security and resiliency features into their products. Finally, it

[2] *See* Comments of Northeast Utilities System to the Department of Energy's Request for Information on the Implementing the National Broadband Plan by Studying the Communications Requirements of Electric Utilities To Inform Federal Smart Grid Policy at 3 (filed July 12, 2010) (explaining that "We have been experiencing more and more problems with our leased telephone lines which use copper based facilities. The last mile telephone carriers have not maintained the copper cable plant due to increased costs and fewer personnel. T1 circuits which were traditionally constructed using 4 wire repeates have been replaced with 2 wire circuits using ADSL/HDSL type electronics. This change in technology has helped the telcos to reduce engineering and cable maintenance costs but it has reduced curcuit reliability and limited our ability to design highly available solutions for electric grid protection & control systems.") Note that in its comments to the DOE, Northeast Utilities provided a table of data showing the actual statistics from its corporate router reporting availability of networks between the period May 2009 to April 2010.

concluded that expanded outage reporting information could help financial services to comply with regulatory requirements mandating that financial institutions implement robust business continuity plans.

3. Outage reporting will help utilities meet their reliability requirements.

UTC echoes the FSCC's assessment and emphasizes that utilities and CII are also subject to regulatory requirements mandating robust business continuity plans. State PUCs evaluate various reliability data and customer satisfaction data in deciding rate requests and allowing utilities to recover costs of implementing performance improvement programs. Types of Reliability data that PUCs evaluate include:

- CAIDI – Customer Average Interruption Duration Index
- CAIFI – Customer Average Interruption Frequency
- CEMI – Customer Experiencing Multiple Interruptions
- CELI – Customer Experiencing Long Interruptions
- MAIFI – Momentary Average Interruption Frequency Index
- SAIFI – System Average Interruption Frequency Index
- SAIDI – System Average Interruption Duration Index[3]

In addition, The Department of Energy (DOE), under its relevant authorities, has established mandatory reporting requirements for electric emergency incidents and disturbances in the United States. DOE collects this information from the electric power industry on Form EIA-417 to meet its overall national security and Federal Energy Management Agency's Federal Response Plan (FRP) responsibilities.[4]

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[3] Comments of the Edison Electric Institute to the Department of Energy's Request for Information on the Implementing the National Broadband Plan by Studying the Communications Requirements of Electric Utilities To Inform Federal Smart Grid Policy at 6 (filed July 12, 2010).

[4] *See* U.S. Department of Energy, Energy Information Administration, Form EIA-417 (2004) at ftp://ftp.eia.doe.gov/pub/pdf/electricity/insteia417.pdf. Note that utilities are required to file an initial report to DOE within 60 minutes of the incident and then file a follow-up report within 48 hours of the time of system disruption. The Form EIA-417 must be submitted to the DOE Operations Center if any one of the following apply:

1. Uncontrolled loss of 300 MW or more of firm system load for more than 15 minutes from a single incident
2. Load shedding of 100 MW or more implemented under emergency operational policy
3. System-wide voltage reductions of 3 percent or more
4. Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the electric power system
5. Actual or suspected physical attacks that could impact electric power system adequacy or reliability; or vandalism which target components of any security systems
6. Actual or suspected cyber or communications attacks that could impact electric power system adequacy or vulnerability

Finally, in the wake of the 2003 Northeast Blackout, Congress passed the Energy Policy Act of 2005, which required the establishment of minimum mandatory standards of reliability for the U.S. energy sector. These standards were developed by the North American Electric Reliability Corporation (NERC) and became effective on June 18, 2007.[5]

4. The benefit of adopting meaningful outage reporting requirements will outweigh the burdens.

Given the reliability standards that utilities and other sectors must meet, the FCC should adopt comparable standards for network outage reporting by commercial service providers. In that regard, the Commission should define an "outage" as at least "a complete loss of the ability to complete calls", and it should consider a threshold based on lost or delayed packets.[6] Utilities demand high performance networks for smart grid and other applications. Therefore, latency, jitter and packet loss – as well as complete loss of communications – is important for utilities operations and decision making.

As the Commission has acknowledged, broadband and VoIP are different from legacy networks and these differences raise practical issues for applying current standards to broadband and VoIP networks.[7] But, these practical issues are not insurmountable and can be overcome.[8] Moreover, the benefits from adopting appropriate standards for network outage reporting should outweigh any burdens, especially when the wider economic, safety, security and societal impacts of such outages are considered.[9]

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7. Fuel supply emergencies that could impact electric power system adequacy or reliability
8. Loss of electric service to more than 50,000 customers for 1 hour or more
9. Complete operational failure or shut-down of the transmission and/or distribution electrical system

[5] These Critical Infrastructure Protection (CIP) standards establish the minimum requirements that all electric power entities in North America must follow to secure the electronic exchange of information needed to support the reliability of the nation's bulk power system. Currently, NERC is developing version 4 of its CIP standards.
[6] *NPRM* at ¶27.
[7] *Id.* (stating that "[b]roadband networks operate differently than legacy networks, so the impact of outages is likely to be different.")
[8] *See e.g.* NPRM at ¶27 (recognizing the difficulty of distinguishing precisely when a VoIP end system cannot place a call as opposed to when it is simply temporarily disconnected from the network due to user choice or home network failure, and asking if statistical measures that compare typical to current device registration counts (e.g., number of active SIP registration entries) can be used to detect and measure large-scale outages).
[9] *NPRM* at ¶30 (requesting comments on: the costs, burdens and benefits of its proposed rules on outage reporting by interconnected VoIP service providers, and whether the proposed rules would promote the reliability, resiliency

5. Outage reporting should be mandatory and the process should be consistent with existing Part 4 requirements.

UTC supports the Commission's proposal that, consistent with its current Part 4 requirements, outage reporting should be mandatory, and that broadband and VoIP providers should be required to submit a Notification within two hours of discovering a reportable outage; an Initial Report within 72 hours after discovering the outage; and a Final Report within 30 days after discovering the outage.[10] UTC submits that voluntary reporting would not promote reliable data, and prompt reporting is needed to effectively respond to significant outages. If the outage was not the fault of the service provider, the Commission should allow the service provider to explain that in its report. But, it shouldn't exempt providers from reporting such outages, and it shouldn't rely on the Disaster Information Reporting System (DIRS) as a poor substitute for network outage reporting, generally.[11]

UTC supports the adoption of a similar reporting process to the current process under Part 4, and believes that it would be acceptable to treat network outage reporting information as presumptively confidential. UTC recognizes that certain information should not be disclosed for safety and security reasons, as well as commercial proprietary reasons. Therefore, it may be appropriate for the Commission to merely publicly report aggregated information across companies, e.g., total number of incidents by root cause categories.[12]

6. The FCC has the legal authority to extend outage reporting requirements to broadband and interconnected VoIP services.

Finally, UTC agrees with the FCC that outage reporting is reasonably ancillary to its authority to implement 9-1-1 systems.[13] As the Commission explained, broadband and VoIP are increasingly used and 9-1-1 calls over VoIP must be reliable and secure, which depends as much on the underlying broadband network as it does on the VoIP service. As such, extending network outage reporting

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and security of 9-1-1 and other communications over interconnected VoIP service and the networks that support such service.)

[10] *NPRM* at ¶56.

[11] *See NPRM* at ¶57 (disagreeing with commenters who suggest that the Commission adopt voluntary reporting rules or rely on DIRS).

[12] *NPRM* at ¶66.

[13] *NPRM* at ¶67-69.

requirements to VoIP and broadband is reasonably ancillary to carrying out the FCC's authority over 9-1-1.[14]

CONCLUSION

In conclusion, UTC appreciates the opportunity to provide these reply comments in response to the Commission's rulemaking into extending outage reporting requirements to broadband and interconnected VoIP providers. As UTC has explained herein, utilities need reliable communications to support the safe, secure and efficient delivery of essential services to the public at large. Utilities and CII are increasingly using broadband and VoIP for their communications, and they do use commercial service providers for some of their communications needs. UTC agrees with the FCC and commenters on the record that adopting rules that extend the Part 4 network outage reporting requirements to apply to broadband and interconnected VoIP should promote the reliability of these services. To the extent that utilities use commercial services, these rules should promote the reliability of utility communications and the underlying essential electric, gas and water services that they provide. UTC looks forward to working with Commission and commercial service providers on this issue going forward.

Respectfully submitted,

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[14] *Id.*